UNITED STATES ARMY
TARDEC
TANK-AUTOMOTIVE RESEARCH DEVELOPMENT AND ENGINEERING CENTER

CONTACT: Paul D. Mehney, TARDEC, 586-770-3438
Scott Sadlon, NAC, 703-253-0944

SOLDIERS: PROTECTED AND SUSTAINED THROUGH TARDEC TECHNOLOGIES SHOWCASED AT 2004 AUSA ANNUAL MEETING

WASHINGTON, D.C. – Oct. 25, 2004 – The U.S. Army's Tank-Automotive Research, Development and Engineering Center (TARDEC) will demonstrate its commitment to supporting our Soldiers at the 2004 Association of the United States Army (AUSA) Annual Meeting in Washington, D.C., October 25 – 27, 2004 (Booth 3201). Highlights will include ground vehicle survivability programs and TARDEC's National Automotive Center's (NAC) Concept HMMWV demonstrator featuring a streamlined engine change-out process.

"With our Army at War, our Soldiers face daily threats and challenges most Americans would find hard to comprehend," said Dr. Richard McClelland, Director of TARDEC. "In the spirit of being 'Relevant and Ready," TARDEC is ensuring that our brave men and women are equipped with the best vehicle technology available."

The Concept HMMWV, built in partnership with Carlson Technologies, was designed with the goal of reducing engine change to the absolute minimum. The HMMWV redesign reduces engine change time from 5-10 hours to 20 minutes or less, getting the much needed HMMWV back into the field faster while saving the Army significant time and money. Benefiting the Soldier, the concept HMMWV offers extended range, enhanced safety features and increased space for more leg room and extra gear. In addition, the HMMWV is equipped with a 5-10 kW Auxiliary Power Unit (APU), micro-climate cooling and beltless engine.

Leading the Army's Survivability Integrated Product Team (IPT), TARDEC works with the Army Research Lab (ARL) and industry partners to assess requirements, develop armor solutions and seek out lighter, more durable composite materials for current and Future Force vehicle structures. The work of the Survivability IPT is helping Soldiers counter Integrated Explosive Device (IED) and Rocket Propelled Grenade (RPG) events as they are deployed in support of Operation Iraqi Freedom and Operation Enduring Freedom (OIF/OEF). TARDEC has performed ballistic research and integrated design of the HMMWV Armor Survivability Kits to armor vehicles fielded in OIF/OEF. TARDEC will also display a motorized gun ring, which provides the M1114 HMMWV gunner increased flexibility in target selection.

Michael D. Brown, First Sergeant, First Calvary Division, U.S. Army, has been stationed in Iraq since March 2004. In August, Brown's HMMWV was outfitted with the TARDEC/ARL developed Armor Survivability Kit for an added layer of protection while patrolling the streets of Baghdad. During a mission later that month, Brown's convoy was ambushed with heavy small arms fire, IEDs and RPGs. While sustaining several direct hits to his vehicle, Brown claimed that the Armor Survivability Kit helped save his life.

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"The protection of the armored doors and ballistic glass windows that all the companies worked so hard to design, develop and install is a great achievement that speaks volumes to the industry and the hard work you do to contributing to our ongoing fight against terrorism," said Brown.

Some of the other technologies TARDEC will showcase include a fuel cell-battery hybrid Alternative Mobility Vehicle (AMV), a next-generation Personal Transport Vehicle (PTV) and the Stryker Battle Command on the Move.

Alternative Mobility Vehicle (AMV)

The NAC has partnered with Quantum Technologies to build a fuel cell-battery hybrid AMV that gives our Soldiers better acceleration, more speed and the ability to maneuver in stealth mode when operating on battery power alone. The AMV couples a 10 kW proton exchange membrane fuel cell to an Energy Conversion Device (ECD) nickel metal hybrid battery pack, and runs on compressed hydrogen stored at 5,000 psi in Quantum's proprietary type IV carbon fiber tanks.

Personal Transport Vehicle (PTV)

A component of the NAC's Personal Soldier Mobility Program, the American Chariot PTV is designed to provide dynamic, efficient personal Soldier transportation options for the armed services. Potential applications for the PTV include moving personnel around large military bases, airfields, warehouse and supply facilities and large naval vessels. The PTV can also be used for military law enforcement to increase productivity and enhance crowd control. The vehicle's speed, maneuverability, accessibility, range and zero down time needed for recharging make it ideally suited for today's mobile military.

Stryker Battle Command on the Move

The prototype Battle Command on the Move Stryker combines the mission equipment package from PM Battle Command on the Move (PM BCOTM) with TARDEC's fabrication and systems integration capabilities to create a powerful mobile battle command center. The upgraded, Soldier-friendly, mobile command post is equipped with the latest radios, computers and network components to give Soldiers unprecedented battlefield situational awareness and survivability capabilities.

TARDEC, headquartered at the Detroit Arsenal, Warren, Michigan, is responsible for developing and maintaining vehicles for all U.S. Armed Forces, many federal agencies and more than 60 foreign countries. TARDEC's National Automotive Center is the Army's official link to commercial industry, academia and government in developing new dual-use automotive technologies that meet the needs of both defense and commercial industries. Together, they lead the way in providing our Soldiers with vehicles and vehicle technologies that will increase survivability and ensure mobility on the battlefield while reducing design, manufacturing, operations and maintenance costs.